

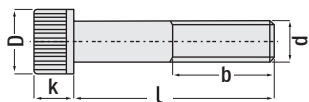


Inox Hex-socket Head Cap Screw
DIN 912 ISO 4762, A2-A4

Code: **IMBP**



(Hex Key)



d	l _{mm}	b	D	k	s
M3 x 05	6	6	5.5	3	2.5
	8	8			
	10	8.5			
	12	12			
	15	15			
	16	16			
	20	18			
	25	23			
	30	20			
	35	33			
40	20				
M4 x 07	8	6	7	4	3
	10	8			
	12	10			
	16	15			
	20	18			
	25	23			
	30	20			
	35	20			
	40	20			
	45	20			
50	20				
M5 x 08	8	6	8.5	5	4
	10	8			
	12	12			
	16	15			
	20	18			
	25	23			
	30	22			
	35	22			
	40	22			
	45	22			
	50	22			
	60	22			
	70	22			
	80	22			
90	22				
100	22				

d	l _{mm}	b	D	k	s
M6 x 1	10	7	10	6	5
	12	12			
	16	16			
	20	17			
	25	22			
	30	27			
	35	24			
	40	24			
	45	24			
	50	24			
	60	24			
	70	24			
	80	24			
	90	24			
	100	24			
	110	24			
120	24				
130	24				
M8 x 1.25	10	8	13	8	6
	15	13			
	20	17			
	25	22			
	30	27			
	35	32			
	40	28			
	45	28			
	50	28			
	60	28			
	70	28			
	80	28			
	90	28			
	100	28			
110	28				
120	28				
130	28				
140	28				
150	28				
M10 x 1.50	16	16	16	10	8
	20	16			
	25	21			
	30	26			
	35	31			
	40	36			
	45	32			
	50	32			
	60	32			
	70	32			
	80	32			
	90	32			
	100	32			
	110	32			
120	32				
130	32				
140	32				
150	32				

Code: **IMBP**

d	l _{mm}	b	D	k	s
M12 x 1.75	20	15	18	12	10
	25	20			
	30	25			
	35	30			
	40	35			
	45	40			
	50	45			
	60	36			
	70	36			
	80	36			
	90	36			
	100	36			
	110	36			
	120	36			
	130	36			
	140	36			
150	36				

Order: **IMBP. d x l**

NEW

Code: **IMBF**

Hex-socket Button Head Screw with Flange
ISO 7380-2
10.9
Zinc Plated

d	l	d1	d2	SW
M6	10	13.6	3.3	4
	12			
	16			
M8	16	17.8	4.4	5
	20			
M10	20	21.9	5.5	6

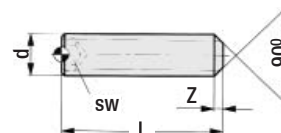
Mounting Example

Order: **IMBF. d x l**



Code: **SECP**

Inox Hex-socket Set Screw
DIN 916 ISO 4029, A2-A4



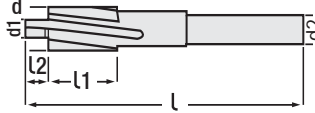
d	l _{mm}	Z	SW
M3 x 05	8	0.5	1.5
	10		
	16		
M4 x 07	8	0.7	2
	10		
	16		
	20		
M5 x 08	10	0.75	2.5
	16		
	20		
	25		
	30		
M6 x 1	10	1.0	3.0
	16		
	20		
	25		
	30		
	35		
	40		
M8 x 1.25	10	1.2	4.0
	16		
	20		
	25		
	30		
	35		
	40		
	45		
	50		
	M10 x 1.50		
16			
20			
25			
30			
35			
40			
45			
50			
M12 x 1.75		10	2.0
	16		
	20		
	25		
	30		
	35		
	40		
	45		
	50		
	60		

Order: **SECP. d x l**

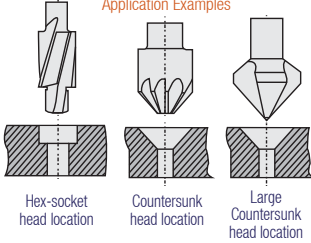


Code: **ICF**

Socket Cap Screw Counterbore



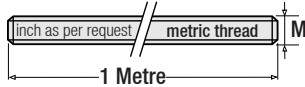
Application Examples



M	d	d1	d2	l	l1	l2
M3	6	3.2	5	71	14	4
M4	8	4.3				
M5	10	5.3	8	80	18	6
M6	11	6.4				
M8	15	8.4	100	22	14	8
M10	18	10.5				
M12	20	13	12.5	100	22	12
M14	24	15				
M16	26	17	16	18	20	18
M18	30	19				
M20	33	20	20	22	24	20
M22	36	22				

Order: **ICF. M x d**

Straight Stud

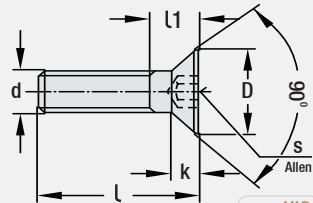


Order	M	Steel	INOX
GSM.3	M3	✓	
GSM.4	M4	✓	
GSM.5	M5	✓	
GSM.6	M6	✓	✓
GSM.8	M8	✓	✓
GSM.10	M10	✓	✓
GSM.12	M12	✓	✓
GSM.14	M14	✓	✓
GSM.16	M16	✓	✓
GSM.18	M18	✓	
GSM.20	M20	✓	
GSM.22	M22	✓	
GSM.24	M24	✓	



Order / Code: **HIC. d x L**

Countersunk Head Screw
Class: 10.9 DIN 7991



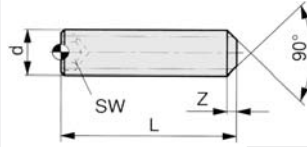
Code: **HIC**

d	l _{mm}	l1	D	k	s
M3 x 05	8	3.2	6	1.7	2
	10				
	15				
M4 x 07	10	4.4	8	2.3	2.5
	15				
	20				
	25				
	30				
M5 x 08	10	5.2	10	2.8	3
	15				
	20				
	25				
	30				
	35				
	40				
M6 x 1	10	6.3	12	3.3	4
	15				
	20				
	25				
	30				
	35				
	40				
M8 x 1.25	10	8.2	16	4.4	5
	15				
	20				
	25				
	30				
	35				
	40				
M10 x 1.50	15	10	20	5.5	6
	20				
	25				
	30				
	35				
	40				
	50				
M12 x 1.75	20	11.8	24	6.5	8
	25				
	30				
	35				
	40				
	50				
	60				
M16 x 2	25	15.4	30	8.5	10
	30				
	35				
	40				
	50				
	60				
	70				



Order / Code: **SEC. d x L**

Hex-socket Set Screws



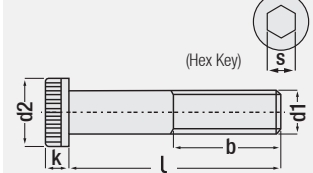
Code: **SEC**

d	l _{mm}	Z	SW
M3 x 05	8	0.5	1.5
	10		
	15		
M4 x 07	8	0.7	2
	10		
	15		
M5 x 08	10	0.75	2.5
	15		
	20		
	25		
	30		
M6 x 1	10	1.0	3.0
	15		
	20		
	25		
	30		
	35		
	40		
M8 x 1.25	10	1.2	4.0
	15		
	20		
	25		
	30		
	35		
	40		
M10 x 1.50	10	1.5	5.0
	15		
	20		
	25		
	30		
	35		
	40		
M12 x 1.75	10	2.0	6.0
	15		
	20		
	25		
	30		
	35		
	40		
M14 x 2	20	2	7
	25		
	30		
	35		
	40		
	50		
	60		
M16 x 2	20	2	8
	25		
	30		
	35		
	40		
	50		
	60		



Order / Code: **DKM. d1 x L**

Low Head Socket Cap Screw
Class: 8.8 DIN 79849



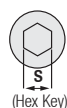
Code: **DKM**

d1	l _{mm}	b	d2	k	s
M4	10	8	7	2.8	2.5
	12	10			
	16	14			
	20	14			
M5	10	8	8,5	3,5	3
	12	10			
	16	14			
	20	16			
	25	16			
	30	16			
	35	16			
M6	10	8	10	4	4
	12	10			
	16	14			
	20	18			
	25	18			
	30	18			
	35	18			
M8	16	14	13	5	5
	20	18			
	25	22			
	30	22			
	40	22			
	50	22			
	60	22			
M10	16	14	16	6	7
	20	18			
	25	22			
	30	26			
	35	26			
	40	26			
	50	26			
M12	20	18	18	7	8
	25	23			
	30	28			
	35	30			
	40	30			
	50	30			
	60	30			

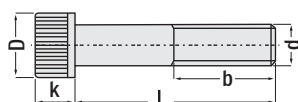


Hex-socket Head Cap Screw

Code: **IMB**



DIN 912 ISO 4762
Class: **12.9**



d	l _{mm}	b	D	k	s
M3 x 05	10	8.5	5.5	3	2.5
	15	15			
	20	18			
	25	23			
	30	20			
M4 x 07	10	8	7	4	3
	15	14			
	20	18			
	25	23			
	30	20			
	35	20			
	40	20			
	45	20			
	50	20			
	60	20			
	70	20			
80	20				
90	20				
100	20				
M5 x 08	10	8	8.6	5	4
	15	14			
	20	18			
	25	23			
	30	22			
	35	22			
	40	22			
	45	22			
	50	22			
	60	22			
	70	22			
	80	22			
	90	22			
	100	22			
110	22				
120	22				
130	22				
150	22				



Order: **IMB. d x l**

d	l _{mm}	b	D	k	s
M6 x 1	10	7	10	6	5
	15	13			
	20	17			
	25	22			
	30	27			
	35	24			
	40	24			
	45	24			
	50	24			
	55	24			
	60	24			
	70	24			
	80	24			
	90	24			
	100	24			
	120	24			
130	24				
150	24				
160	24				
M8 x 1.25	10	8	13	8	6
	15	13			
	20	17			
	25	22			
	30	27			
	35	32			
	40	28			
	45	28			
	50	28			
	55	28			
	60	28			
	70	28			
	80	28			
	90	28			
	100	28			
	120	28			
130	28				
140	28				
150	28				
160	28				
180	28				
200	28				
M10 x 1.50	20	16	16	10	8
	25	21			
	30	26			
	35	31			
	40	36			
	45	32			
	50	32			
	55	32			
	60	32			
	70	32			
	80	32			
	90	32			
	100	32			
	110	32			
	120	32			
	130	32			
150	32				
160	32				
180	32				
200	32				
260	32				
300	32				

d	l _{mm}	b	D	k	s
M12 x 1.75	20	15	18	12	10
	25	20			
	30	25			
	35	30			
	40	35			
	45	40			
	50	45			
	55	36			
	60	36			
	70	36			
	80	36			
	90	36			
	100	36			
	110	36			
	120	36			
	130	36			
150	36				
160	36				
180	36				
200	36				
260	36				
300	36				
M14 x 2	30	24	21	14	12
	35	29			
	40	34			
	45	39			
	50	44			
	60	44			
	70	44			
	80	44			
	90	44			
	100	44			
	110	44			
	120	44			
	130	44			
	150	44			
	160	44			
	180	44			
200	44				
240	44				
260	44				
300	44				
M16 x 2	30	24	24	16	14
	35	29			
	40	34			
	45	39			
	50	44			
	55	49			
	60	54			
	70	44			
	80	44			
	90	44			
	100	44			
	110	44			
	120	44			
	130	44			
	140	44			
	150	44			
160	44				
180	44				
200	44				
220	44				
240	44				
260	44				
300	44				

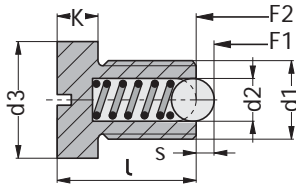
d	l _{mm}	b	D	k	s
M18 x 2.50	40	34	27	18	14
	50	43			
	60	53			
	70	52			
	80	52			
	100	52			
	120	52			
	140	52			
	160	52			
	180	52			
	200	52			
220	52				
240	52				
260	52				
300	52				
M20 x 2.50	40	34	30	20	17
	50	43			
	60	53			
	70	52			
	80	52			
	90	52			
	100	52			
	120	52			
	140	52			
	160	52			
	180	52			
200	52				
220	52				
240	52				
260	52				
300	52				
M24 x 3	50	50	36	24	19
	60	52			
	70	61			
	80	71			
	90	60			
	100	60			
	120	60			
	140	60			
	150	60			
	160	60			
	180	60			
200	60				
220	60				
240	60				
260	60				
300	60				



Code: **SBS**

Spring Plunger with Slotted Head

Mounting: Fixing with screwdriver.



It is for locking, compressing upwards and downwards. Fixable with screwdriver.

Heat Resistance Maximum: 250°C.

d1	l	s	d2	d3	K	F1(N)	F2(N)
M6	14	1	3.5	10	5	11	18
M8	16.5	1.5	4.5	13	5	18	31
M10	20	2	6	16	6	24	45
M12	22	2.5	8	18	7	24	49



Order: **SBS. d1**

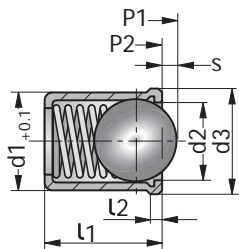
Material: Steel quality 5.8



Code: **KBS**

Spring Plunger with Bushing

For systems such as elevator and sliding etc.



Hole mounting with reamer

d1	l1	d2	d3	l2	s	P1(N)	P2(N)
4	5	3.0	4.6	1	0.90	2	5
5	6	4.0	5.6		1.00	4	7
6	7	5.0	6.5		1.50	6	12
8	9	6.5	8.5		1.80	6	12



Order: **KBS. d1**

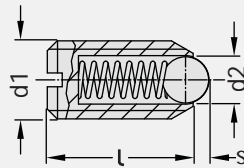
Material: Steel quality 5.8



Code: **BSM**

Spring Plunger

Mounting: Fixing with screwdriver.



Usage Area:

- Locating
- Pulling, pushing
- Extractor
- Clamping

It is used as core / slide lock etc. in injection mould. As stamp extractor in die and also can be used for bushing of threaded shafts, limiting the torque tools and positioning of level adjuster.

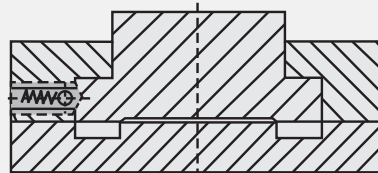
Material structure; machinable steel bushing - hardened bearing steel ball - winding steel spring.

Heat Resistance Maximum: 250°C.

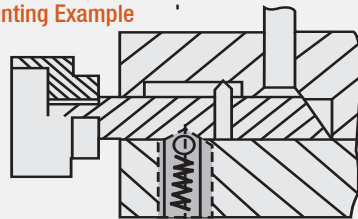
Code: **BSM**

d1 (thread)	l mm	S mm	d2 mm	Initial Force	Final Force
M4	9	0.8	2.5	6 Nw	12 Nw
M5	12	0.9	3.0	7 Nw	13 Nw
M6	14	1.0	3.5	9 Nw	15 Nw
M8	16	1.5	5.0	20 Nw	35 Nw
M10	19	2.0	6.0	25 Nw	45 Nw
M12	22	2.5	8.0	35 Nw	60 Nw
M16	24	3.5	10	65 Nw	110 Nw

* Please don't exceed the force values.



Mounting Example



N - Newton = (0.102)Kgf
daN -10 Newton = (1.020)Kgf



Order: **BSM. d1**

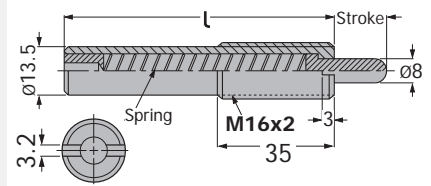
Material: Steel quality 5.8



Code: **PSK**

Spring Plunger

Mounting: Fixing with "PMT" mounting kit.



Protective plating that prevents oxidation on the part surface is available. The ball is from steel material and is hardened and polished.

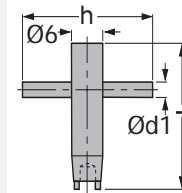
* Please don't exceed the force values.

Stroke	l mm	Initial Force	Final Force
20	80	24 Nw	186 Nw
40	150	59 Nw	177 Nw
60	150	11 Nw	45 Nw
80	200	2 Nw	38 Nw



Order: **PSK. Stroke**

Material: Pin 1.1273 Hardness: 40 HRC



Code: **PMT**

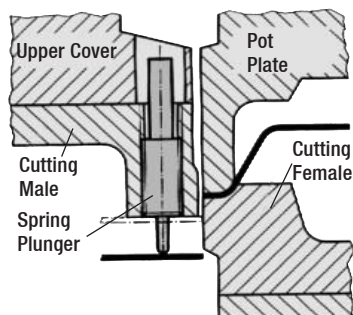
Mounting Kit for Spring Plungers

Spring Plunger (M)	h mm	d Ø	d1 Ø	l mm
M5 - M6	40	6	3	40
M8	45	8	4	45
M10	45	10	4	45
M12	80	12	5	50
M16	70	16	8	52
M24	80	24	12	62
M30	100	30	15	73



Order: **PMT. d**

Material: Steel 5.8 Hardness: 36 - 40 HRC



Spring Plunger

Code: **PS1**

Spring plunger can be used in many designs such as die and equipment production. Especially, it is operated as extractor - dampener - stabilizer and retaining pin.

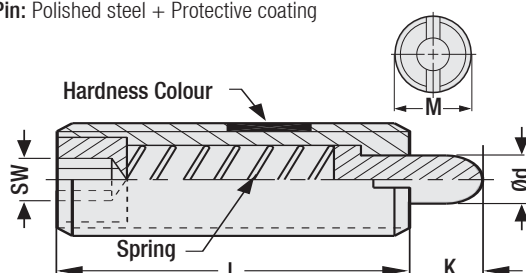
* Please don't exceed the force values.

Mounting: Fixing with "PMT" mounting kit.

It is for locking, compressing upwards and downwards. The lock prevents the reaching of liquids and oils to the pin.

Working Temperature: Between -30 C and +80 C

Pin: Polished steel + Protective coating



Code: **PS1**

Series	M Thread	k mm	l mm	d Ø	SW	Initial Force N (Kgf)	Final Force N (Kgf)
1	M3x0.5	1.5	10	1.0	0.8	0.4 (0.05)	2.9 (0.3)
2	M4x0.7	2.0	12	1.6	0.8	1.9 (0.2)	9.8 (1.0)
3	M5x0.8	3.0	20	2.0	1.5	3.9 (0.4)	19.6 (2.0)
4	M5x0.8	3.0	13	2.0	1.5	1.9 (0.2)	7.8 (0.8)
5	M5x0.8	3.0	20	2.0	1.5	1.9 (0.2)	9.8 (1.0)
6	M6x1.0	3.0	25	2.5	2.0	2.9 (0.3)	9.8 (1.0)
7	M6x1.0	3.0	25	2.5	2.0	7.8 (0.8)	29.4 (3.0)
8	M8x1.25	3.0	25	3.1	2.5	2.9 (0.3)	9.8 (1.0)
9	M8x1.25	3.0	25	3.1	2.5	7.8 (0.8)	29.4 (3.0)
10	M10x1.5	5.0	30	3.8	3.0	2.9 (0.3)	14.7 (1.5)
11	M10x1.5	5.0	30	3.8	3.0	9.8 (1.0)	49.0 (5.0)
12	M12x1.75	5.0	30	5.5	4.0	1.9 (0.2)	9.8 (1.0)
13	M12x1.75	5.0	30	5.5	4.0	9.8 (1.0)	49.0 (5.0)

* Blue products are medium force in the table.

Order: **PS1. Series**

Material: Case 1.7220
Pin: 1.1273 / HRC 36-40

Spring Plunger

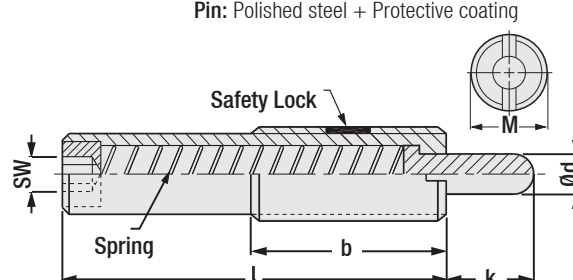
Code: **PS2**

Mounting: Fixing with "PMT" mounting kit.

It is for locking, compressing upwards and downwards. The lock prevents the reaching of liquids and oils to the pin.

Working Temperature: Between -30 C and +80 C

Pin: Polished steel + Protective coating



Code: **PS2**

Series	M Thread	k mm	l mm	b mm	d Ø	SW	Initial Force N (Kgf)	Final Force N (Kgf)
14	M12x1.75	10	43	35	5.5	4	3.9 (0.4)	19.6 (2)
15	M12x1.75	10	43	35	5.5	4	6.8 (0.7)	39.2 (4)
16	M16x2.0	10	50	35	8	5	9.8 (1)	49.0 (5)
17	M16x2.0	10	50	35	8	5	19.6 (2)	98.0 (10)
18	M16x2.0	10	60	35	8	5	12.7 (1.3)	39.2 (4)
19	M16x2.0	10	60	35	8	5	26.4 (2.7)	78.4 (8)
20	M16x2.0	15	60	35	8	5	9.8 (1)	39.2 (4)
21	M16x2.0	15	60	35	8	5	14.7 (1.5)	78.4 (8)
22	M16x2.0	20	60	35	8	5	12.7 (1.3)	39.2 (4)
23	M16x2.0	20	85	35	8	5	16.6 (1.7)	78.4 (8)
24	M16x2.0	30	125	35	8	5	17.6 (1.8)	39.2 (4)
25	M16x2.0	30	125	35	8	5	19.6 (2)	78.4 (8)
26	M16x2.0	50	155	35	8	8	19.6 (2)	49.0 (5)
27	M16x2.0	50	155	35	8	8	29.4 (3)	98.0 (10)
28	M24x3.0	15	60	45	10	8	19.6 (2)	98.0 (10)
29	M24x3.0	15	60	45	10	8	39.2 (4)	196.1 (20)
30	M30x3.5	20	70	45	15	12	29.4 (3)	147.0 (15)
31	M30x3.5	20	70	45	15	12	49.0 (5)	294.1 (30)

* Red products are high force in the table.

Order: **PS2. Series**

Order Example:
PS2.14

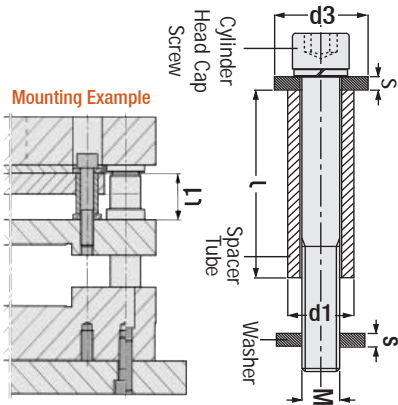


Spring and Spacer Unit Code: **G71**

Assembly of Spring and Spacer Unit:

Spring and Spacer Units are ground equally after mounted to punch retainer plate. When punches are ground due to abrasion, for loosing unit as 0.1 mm, the length of junction should adjust.

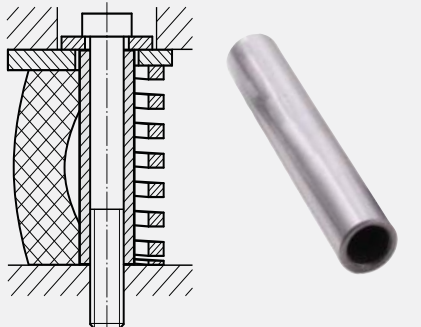
Note: This product is with o-ring and o-ring should be removed before mounting.



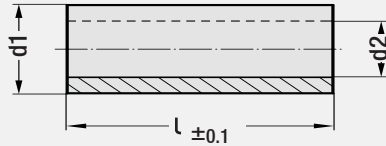
Code: **G71**

d1	l1	d3	l	s	M
13	33	18	29	4	M8 x50
	43		39		M8 x60
	53		49		M8 x70
	63		59		M8 x80
	73		69		M8 x90
15	33	20	29	4	M10 x60
	43		39		M10 x70
	53		49		M10 x80
	63		59		M10 x90
	73		69		M10 x100

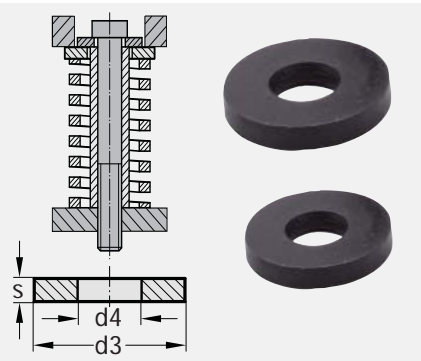
Order: **G71**. d1x l1
Material: 1.7131
Hardness: 58 ± 2 HRC



Spacer Tube Code: **G71B**



Order Code	d1	l	d2
G71B.1329	13	29	8.2
G71B.1339		39	8.2
G71B.1349		49	8.2
G71B.1359		59	8.2
G71B.1369		69	8.2
G71B.1529	15	29	10.2
G71B.1539		39	10.2
G71B.1549		49	10.2
G71B.1559		59	10.2
G71B.1569		69	10.2

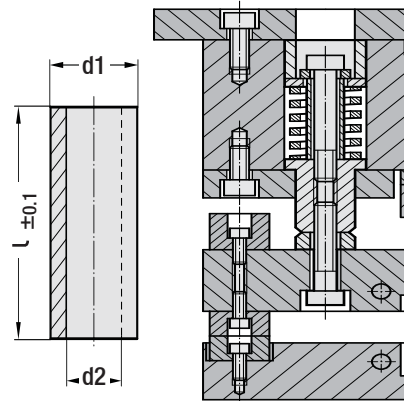


Washer Code: **G71P**

Order Code	d3	d4	s
G71P.18	18	8.4	4
G71P.20	20	10.5	4



Spacer Tube Code: **G71Y**



Code: **G71Y**

d1	l	d2	d1	l	d2
10	20	6.5	20	30	13
	25			40	
	30			50	
	32			63	
	40			80	
	50			100	
	63			125	
	80			140	
12	20	8.5	25	40	17
	25			50	
	30			63	
	40			80	
	50			100	
	63			125	
	80			140	
	100			160	
16	30	11	38	63	25
	40			80	
	50			100	
	63			125	
	80			140	
	100			160	
	125			200	
	140			250	

Order: **G71Y**. d1x l
Material: 1.7131
Hardness: 58 ± 2 HRC

Code: G39

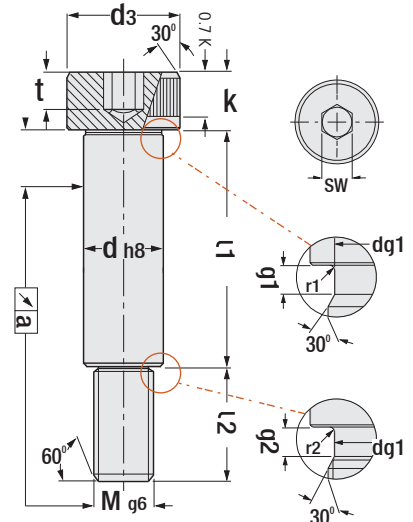
d	l1 (Js11)	M	d3	L2 (± 0.25)	k	SW
6	10	M5	d3: 10	L2: 9.5	k: 4.5	3
	12					
	16					
	20					
	25					
	30					
	35					
	40					
	45					
	50					
55						
60						
Clamping Torque Nm: 7						
8	10	M6	d3: 13	L2: 11	k: 5.5	4
	12					
	16					
	20					
	25					
	30					
	35					
	40					
	45					
	50					
55						
60						
65						
70						
80						
90						
100						
Clamping Torque Nm: 13						
10	16	M8	d3: 16	L2: 13	k: 7	5
	20					
	25					
	30					
	35					
	40					
	45					
	50					
	55					
	60					
65						
70						
80						
90						
100						
Clamping Torque Nm: 32						

d	l1 (Js11)	M	d3	L2 (± 0.25)	k	SW
12	16	M10	d3: 18	L2: 16	k: 9	6
	20					
	25					
	30					
	35					
	40					
	45					
	50					
	55					
	60					
65						
70						
80						
90						
100						
120						
Clamping Torque Nm: 65						
16	30	M12	d3: 24	L2: 18	k: 11	8
	35					
	40					
	45					
	50					
	55					
	60					
	65					
	70					
	80					
90						
100						
120						
Clamping Torque Nm: 120						
20	40	M16	d3: 30	L2: 22	k: 14	10
	45					
	50					
	55					
	60					
	65					
	70					
	80					
	90					
	100					
120						
Clamping Torque Nm: 290						
24	50	M20	d3: 36	L2: 27	k: 16	12
	55					
	60					
	65					
	70					
	80					
	90					
	100					
	120					
	Clamping Torque Nm: 500					



Shoulder Screw
ISO 7379 / Class: 12.9

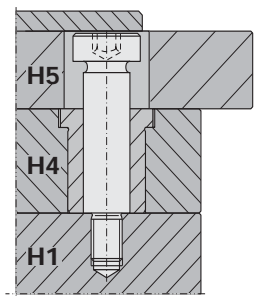
Code: G39



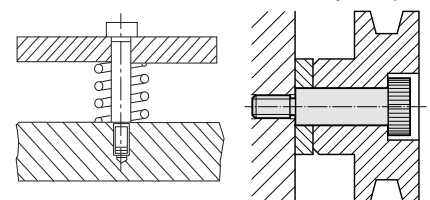
In Spring Use (steel / polyurethane spring):
For precise and secure placement in spring use, also suitable to setting position to injection mould plates. Our production is available in desired dimensions materials and lengths.
Spring working area: h8
Yield stress: Rp = 1080 N / mm²

Class: 12.9
* Heat treated
* High strength steel
* HRC 39 - 44
* Knurled head

Impact test:
KCU 15 J Min.
Elasticity:
A = 8% Min.
Tensile stress:
Rm = 1200 N / mm²



Mounting Example



Order: G39. M x d x l1

Order Example:
G39. M10 x 12 x 50